

In the Claims:

Please add the following claims:

1 1. A pipelined video decoder and decompression system for handling a
2 plurality of separately encoded bit streams arranged as a single bit stream of digital
3 bits, comprising:

4 a start code detector responsive to said single serial bit stream for generating
5 control tokens and data tokens, a said token including a plurality of data words, each
6 data word having an extension bit which indicates a presence of additional words
7 therein so that said start code detector detects overlapping start codes in said bit
8 stream, a first start code thereby being ignored and a second start code used to
9 create start code tokens;

10 a token decode circuit interactively associated with said start code detector,
11 said token decode circuit for recognizing certain of said tokens as control tokens
12 pertinent to a respective processing stage and for passing unrecognized control
13 tokens to a succeeding stage; and

14 a reconfigurable decode and parser unit responsive to a recognized control
15 token for reconfiguring a particular stage to handle an identified data.

1 2. The system as recited in claim 1, further comprising first and second
2 registers, said first register positioned as an input of said decode and parser unit and
3 said second register positioned as an output of said decode and parser unit.

1 3. The system according to claim 1 wherein said single serial bit stream of
2 digital bits includes separately encoded pairs of control codes and corresponding
3 data carried therein.

1 4. The system according to claim 1 wherein said tokens are altered by
2 said processing stages

1 5. A method of processing video data, comprising:
2 receiving video data having portions encoded in accordance with respective
3 different video standards, the plurality of video standards defining corresponding start
4 codes;
5 identifying one of the start codes included in the received video data; and
6 processing the received video data in accordance with the video standard
7 corresponding to the identified start code.

1 6. The method of claim 5 wherein the start code includes an H.261 picture
2 start code.

1 7. The method of claim 5 wherein the start code includes an MPEG (Motion
2 Pictures Experts Group) start code.

1 8. The method of claim 5 wherein the start code includes a JPEG (Joint
2 Photographic Experts Group) start of scan marker.

1 9. The method of claim 5 wherein the start code includes a start code used
2 by a video format that encodes spatial and temporal video data.

1 10. The method of claim 5 wherein the step of processing includes decoding
2 the received video data.

1 11. The method of claim 5 wherein the step of processing includes
2 constructing one or more images for display based on the received video data.

1 12. The method of claim 5 wherein the step of processing includes
2 rearranging one of the portions of received video data into an arrangement that
3 complies with a different one of the video standards.

1 13. A method of processing video data, comprising:
2 receiving a first set of video data encoded in accordance with a first video
3 standard and having a first start code defined by the first video standard;
4 determining the video standard of the first set of video data by identifying the
5 first start code included in the first set of video data;
6 processing the first set of video data in accordance with the first video
7 standard;
8 receiving a second set of video data encoded in accordance with a second
9 video standard and having a second start code defined by the second video
10 standard;
11 determining the second video standard of the second set of video data by
12 identifying the second start code included in the second set of video data; and

13 processing the second set of video data in accordance with the second video
14 standard.

1 14. The method of claim 13 wherein the step of processing includes
2 decoding.

1 15. The method of claim 13 wherein one of the first or the second video
2 standards includes one of either: an MPEG (Motion Pictures Experts Group)
3 standard, a JPEG (Joint Photographic Experts Group) standard, or an H.261
4 standard.

1 16. A method of processing encoded video data, comprising:
2 receiving video data having portions encoded with respective different video
3 standards;
4 determining a video standard from the respective different video standards
5 based on one of start codes embedded in the video data;
6 generating tokens demarcating the received video data; and
7 processing the received video data in accordance with the tokens.

1 17. The method of claim 16 wherein the video standards include at least one
2 of the following: MPEG (Motion Pictures Experts Group), H.261, and JPEG (Joint
3 Photographic Experts Group).

1 18. The method of claim 16 wherein the tokens include a picture start token.

1 19. The method of claim 16 wherein the tokens include a picture end token.

1 20. A method of processing encoded video data at a video data processing
2 stage, comprising:

3 receiving a start identification of one of several video standards of the encoded
4 video data;

5 configuring the video data processing stage based on the received start
6 identification; and

7 processing the video data at the configured video data processing stage in
8 accordance with the received start identification.

1 21. The method of claim 20 wherein the video data processing stage includes
2 a decoder.

1 22. The method of claim 21 wherein the decoder includes a Huffman
2 decoder.

1 23. The method of claim 20 wherein the video data processing stage includes
2 an inverse quantizer.

1 24. The method of claim 20 wherein the step of configuring includes
2 determining tables used by the video data processing stage.

1 25. The method of claim 20 wherein the video data processing stage
2 programmatically alters electrical signals representing the encoded video data.

1 26. A method of processing video data, comprising:
2 receiving a first video data code or marker corresponding to a first video
3 standard;
4 searching video data for the received video code or marker;
5 receiving a second video data code or marker corresponding to a second
6 video standard; and
7 searching video data for the second video data code or marker.

1 27. The method of claim 26 wherein the first video standard includes one of
2 the following: MPEG (Motion Pictures Experts Group, JPEG (Joint Photographic
3 Experts Group), and H.261.

1 28. The method of claim 26 wherein the video data code or marker
2 includes at least one of the following: a picture start code, a sequence start code, a
3 slice start code, a start of scan marker, and a group start code.

1 29. A method of processing video data, comprising:
2 receiving video data;
3 determining a video standard associated with the video data;
4 generating one or more tokens for controlling decoding of the received video
5 data by a decoding pipeline; and
6 decoding the received video data in the decoding pipeline.

1 30. The method of claim 29 wherein determining the video standard
2 includes identifying a start code or marker in the received video data.

1 31. The method of claim 29 wherein the video standard includes at least
2 one of the following: MPEG, JPEG, and H.261.

1 32. The method of claim 29 wherein the step of generating includes
2 generating one or more tokens that configure the decoding pipeline for processing of
3 the determined video standard.

1 33. The method of claim 29 wherein the step of generating includes
2 generating one or more tokens demarcating the received video data.

1 34. The method of claim 29 wherein the demarcating the received video
2 data includes identifying one or more of the following: a picture start, a picture end, a
3 sequence start, and a group start.

1 35. The method of claim 29 wherein the pipeline includes a Huffman
2 decoder.

1 36. The method of claim 29 wherein the pipeline includes instructions for
2 an inverse discrete cosine transform upon a portion of the received video data.

1 37. The method of claim 29 wherein one of the one or more tokens
2 includes a picture start token that identifies the start of a picture in the received video
3 data.

1 38. The method of claim 29 wherein one of the one or more tokens
2 includes a picture end token that identifies the end of a picture in the received video
3 data.